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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,846	09/06/2000	Hajime Tabata	0505-0686P	9786

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EXAMINER	
NGUYEN, HUY D	

ART UNIT	PAPER NUMBER
2681	15

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/655,846	TABATA ET AL.	
	Examiner	Art Unit	
	Huy D Nguyen	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 02/26/2004 have been fully considered but they are not persuasive.

Regarding the argument pertaining to claims 1 and 16, the examiner responds that it would have been an obvious matter of design choice to have the transceiver that includes a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet since the invention would perform equally well regardless of where the operation buttons and the transceiver are placed on the face of the helmet.

Regarding claims 14 and 18, the applicant stated that neither Spector, Swanson et al. nor O'Neill teach novel features of the operation buttons being a volume control switch and a power supply switch, the examiner states that volume control switch and power supply switch are very well known and common in the art.

Regarding claims 19 and 20, the applicant stated that neither Spector, Swanson et al. nor O'Neill teach novel features of the radio wave transceiver having a coil antenna, the examiner states that transceiver with coil antenna are well known and common in the art.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-2, 4, 11-14, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (U.S. Patent No. 6,017,049) in view of Swanson et al. (U.S. Patent No. 6,009,563) and in further view of O'Neill, Jr. (U.S. Patent No. 6,069,588).

Regarding claims 1-2, 12, Spector discloses an interactive safety helmet for a bicyclist comprising: transceiver 16 to which microphone 19 and loudspeakers 13 and 14 are connected (FIG. 3 & 5; Col. 4, lines 62-65). Spector fails to teach that the transceiver is powered by a built-in battery. Swanson et al. teach a sports safety helmet which includes an integral of transceiver and batteries (col. 4, lines 8-9). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of having the transceiver powered by a built-in batteries as taught by Swanson et al. for convenience. The combination of Spector & Swanson et al. fail to teach a repeating apparatus mounted on vehicle for communicating with the transceiver. However, the preceding limitation is well known in the art. O'Neill, Jr. discloses an inside electronic package 110 coupling the inside portion 106a to a radiotelephone 114, and is located adjacent the inside portion 106a and remote from the radiotelephone 114. The electronic package includes a receive amplifier that amplifies RF signals that are received from the outside antenna 102 via the through-the-window coaxial coupler 106 and that provides the amplified RF signal to the radiotelephone 114. The electronic package also include a transmit amplifier that amplifies RF signals from the radiotelephone 114 before being passed through the coaxial coupler. The transmit amplifier raise the transmitted power from the outside antenna 102 to desired levels (FIG. 1; Col. 4, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of O'Neill, Jr. in

the combination of Spector & Swanson et al. in order to amplify the transmit/receive signals to the desired levels to maintain the signal quality and to conserve battery of transceiver 16. The combination of Spector, Swanson et al., and O'Neill, Jr. does not teach that the transceiver includes a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet. However, it would have been an obvious matter of design choice to have the transceiver that includes a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet since the invention would perform equally well with the transceiver including a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet.

Regarding claims 4, 14, the combination teaches the claimed invention except that the radio wave transceiver is removably mounted at the center of a rear portion of each helmet. It would have been an obvious matter of design choice to removably mount the transceiver anywhere on the helmet for convenience.

Regarding claim 11, the combination also teaches that radio wave transceiver 16 includes antenna 17 for transmitting/receiving radio wave signals [Spector - Col. 3, line 41].

Regarding claim 13, the combination does not mention about the battery size. However, AAA is a standard battery size. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build battery accommodation section corresponding to cell size AAA for convenience.

Regarding claim 19, the combination teaches the claimed invention except that the transceiver has an antenna accommodated along an upper inner side of a case of the transceiver. It is inherent that transceiver includes antenna. It would have been an obvious matter of design choice to place the antenna anywhere since the invention would perform equally well with the antenna placed along an upper inner side of a case of the transceiver.

4. Claims 3, 5-10, 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spector (U.S. Patent No. 6,017,049) in view of Swanson et al. (U.S. Patent No. 6,009,563) and O'Neill, Jr. (U.S. Patent No. 6,069,588) and in further view of Heddle et al. (U.S. Patent No. 5,703,794).

Regarding claims 3, 8, 16-18, Spector discloses an interactive safety helmet for a bicyclist comprising: transceiver 16 to which microphone 19 and loudspeakers 13 and 14 are connected (FIG. 3 & 5; Col. 4, lines 62-65). Spector fails to teach that the transceiver is powered by a built-in battery. Swanson et al. teach a sports safety helmet which includes an integral of transceiver and batteries (col. 4, lines 8-9). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of having the transceiver powered by a built-in batteries as taught by Swanson et al. for convenience. The combination of Spector and Swanson et al. does not teach that the transceiver includes a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet. However, it would have been an obvious matter of design choice to have the transceiver that includes a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet since the invention would perform equally

well with the transceiver including a pair of operation buttons disposed one above another on one side of a rear face, when the transceiver is mounted in a predetermined posture at the center of the rear portion of the helmet. The combination of Spector & Swanson et al. fail to teach a repeating apparatus mounted on vehicle for communicating with the transceiver. However, the preceding limitation is well known in the art. O'Neill, Jr. discloses an inside electronic package 110 coupling the inside portion 106a to a radiotelephone 114, and is located adjacent the inside portion 106a and remote from the radiotelephone 114. The electronic package includes a receive amplifier that amplifies RF signals that are received from the outside antenna 102 via the through-the-window coaxial coupler 106 and that provides the amplified RF signal to the radiotelephone 114. The electronic package also include a transmit amplifier that amplifies RF signals from the radiotelephone 114 before being passed through the coaxial coupler. The transmit amplifier raise the transmitted power from the outside antenna 102 to desired levels (FIG. 1; Col. 4, lines 40-51). Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of O'Neill, Jr. in the combination of Spector & Swanson et al. in order to amplify the transmit/receive signals to the desired levels to maintain the signal quality and to conserve battery of transceiver 16. The combination of Spector, Swanson et al., and O'Neill, Jr. does not teach that the repeater includes a mute function and attenuates or interrupts when a sound source having higher priority order and another sound source having lower priority order interfere with each other. However, the preceding limitation is well known in the art. Heddle et al. discloses a method and system for mixing audio stream wherein audio streams from other applications or program modules that do not have the sound focus and are not audible. If the sound focus changes, the audio mixer mutes the audio streams

from the application which had the sound focus and begins sending the audio streams from the new application that has gained the sound focus to the sound card [Col. 2, lines 32-47]. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to implement the teaching of Heddle et al. within the system of the combination of Spector, Swanson et al., and O'Neill, Jr. in order to eliminate unwanted sound.

Regarding claims 5-7, 9-10, the combination also teaches that audio streams from each of the sound generators are connected to audio mixer 22. The audio mixer 22 selects the sound streams from one or more of the sound generators G1-GN and mixes those sound streams as necessary to produce an output signal. The output signal from the audio mixer 22 is connected via the system bus 15 to sound card or sound device 24 [Heddle et al. - Col. 7, lines 1-9].

Regarding claim 15, the combination fails to teach navigation system. The Examiner takes official notice that navigation system supported for movement between positions is well known in the art of communications. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have navigation system supported for movement between positions as in well known in the art for convenience.

Regarding claim 20, the combination teaches the claimed invention except that the transceiver has an antenna accommodated along an upper inner side of a case of the transceiver. It is inherent that transceiver includes antenna. It would have been an obvious matter of design choice to place the antenna anywhere since the invention would perform equally well with the antenna placed along an upper inner side of a case of the transceiver.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D Nguyen whose telephone number is 703-305-3283. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika A Gary can be reached on 703-308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEAN GELIN
PATENT EXAMINER

Jean Gelin